

## Port Wine Stains and Laser

### **What is a port wine stain?**

A port wine stain (PWS) is a capillary vascular malformation – a developmental error of small blood vessels in the skin. The cause is unknown and they are not hereditary. They are present at birth (3/1000 newborns) and stay throughout life. They gradually darken with time and may develop some thickening.

### **Should PWS be treated?**

Each family must make this decision depending upon the site and size of the PWS. The aim of treatment is to improve the cosmetic appearance and prevent the thickening of the tissues that may gradually develop.

### **How does the pulsed dye laser work?**

The laser emits light of wavelength 595nm. This is absorbed by oxyhaemoglobin in blood, creating heat inside blood vessels. This damages the vessels and the body then gradually removes them. Because the heat stays within the blood vessels, the surrounding tissues are not damaged and scarring is rare.

### **How effective is the laser?**

Response depends on the age of the patient, the size of the PWS and its location. We can mostly expect at least 75% fading but there are some PWS that don't respond well at all. It is a repetitive treatment, most requiring 8-10 treatments (occasionally up to 20 treatments are done), the treatments being spaced at 6-8 weekly intervals.

### **What are the risks?**

Complications are uncommon. The risk of scarring is < 2%, but would increase if infection or trauma occurred in the first few days after treatment. In 5% of cases temporary pigmentary changes may occur (the skin looks paler or slightly browner for a few weeks).

### **Does it hurt?**

It is moderately uncomfortable while the treatment is being done and for a few minutes after. The discomfort can be helped by applying EMLA cream thickly under a plastic cover 1-2 hours before the procedure. For large areas in young children a general anaesthetic may need to be considered, which would be done at Princess Margaret Hospital.

### **What after care is required?**

A cold damp cloth is applied to the skin immediately after the treatment, giving immediate relief to the feeling of heat. The treatment leaves grey – purple dots, which gradually fade after 7-10 days. There may also be some mild swelling. The skin can be washed as normal but it is important to be gentle with the skin and minimize trauma. For selected patients I will prescribe a topical antibiotic such as Bactroban. Good sun protection is necessary as a tan will reduce the effectiveness of the laser.

### **Does Medicare consider this to be cosmetic?**

No, there are item numbers for all port wine stains. The out of pocket expense per treatment varies between \$60 and \$250, depending on the size of the PWS.